

# **Microgravity Science Division**

## **List of Acronyms**

**A B C D E F G H I J K L M N O P Q R S T U V W X Y Z**

**1 2 3 4 5 6 7 8 9 0**

### **-A-**

A	Ampere
A&R	Automation and Robotics
AADSF	Advanced Automated Directional Solidification Furnace
AC&S	Altitude Control and Stabilization
ACA	Attitude Control Assembly
ACC	Aft Cargo Carrier
ACCG	American Conferences of Crystal Growers
ACES	Acoustic Containerless Experiment System
ACPF	Acoustic Containerless Processing Facility
ACS	Attitude Control System
ADA	Advanced Development Activity
ADA	DOD High-Level Programming Language
ADH	Advanced Development Hardware
ADP	Advanced Development Program
ADP	Acceptance Data Package
ADSF	Automated Directional Solidification Furnace
AEO	Assurance Engineering Office
AFD	Aft Flight Deck
AFEQ	Adiabatic Fast Equilibration
AFT	Advanced Furnace Technology
AIAA	American Institute of Aeronautics and Astronautics
ALF	Acoustic Levitator Furnace

ALU	Advanced Levitation Unit
AMA	Atmospheric Measurement Assembly
AME	Acceleration Monitoring Experiment
AMO	Assurance Management Office
AO	Announcement of Opportunity
APCGF	Advanced Protein Crystal Growth Facility
APM	Attached Payload Module
AR	Acceptance Review
ARC	Ames Research Center
ARC	Aggregation of Red Blood Cells (Australia)
ARF	Animal Research Facility
ARIS	Active Rack Isolation System
ASCG	Automatic Solution Crystal Growth
ASCO	Specific Change Order
ASTP	Apollo-Soyuz Test Project
ATAC	Advanced Technology Advisory Committee
ATCS	Active Thermal Control Subsystem
ATCU	Active Thermal Control Unit
ATD	Advanced Technology Development
ATE	Automatic Test Equipment
ATHINA	Investigation of Diffusion Flame Tip Thermo-diffusive and Hydrodynamic Instability Under Microgravity Conditions
ATP	Authority to Proceed
AUE	Alloy Undercooling Experiment
AVCG	Automatic Vapor Crystal Growth

**-B-**

B/L	Baseline
BASE	Binary Alloy Solidification Experiment
BASG	Ball Aerospace Group
BBU	Bubble Behavior Unit (Japan)
*BCAT	Binary Colloidal Alloy Tests
BCDCE	Bi-Component Droplet Combustion Experiment
BCL	Battelle Columbus Laboratories
BCOEL	Boiling Heat Transfer & Control of Bubble Motion in Microgravity using Electric Fields
BDPU	Bubble Droplet Particle Unit
BF	Biotechnology Facility
BIO	Space Bioreactor
BIU	Bus Interface Unit
BiSn	Bismuth-Tin Crystal Growth
BRE	Blood Rheology Equipment
BSD	Baseline System Description
BTF	Biotechnology Facility
BTS	Biotelemetry System

C/O	Checkout
C/C	Carrier/Container
C	Celsius
C&T	Communications and Tracking
CAD	Computer-Aided Design
CAE	Computer-Aided Engineering
CAG	Commercial Advocacy Group
CAM	Computer-Aided Manufacturing
CAP	Crew Activity Plan
CAP	Customer Accommodation Plan
CAST	Casting and Solidification Technology
CBT	Computer Based Training
CCB	Configuration Control Board
CCB	Change Control Board
CCD	Charge Coupled Device
CCDS	Centers for the Commercial Development of Space
CCTV	Closed Circuit Television
CDG	Concept Development Group
CDMS	Command and Data Management System
CDOT	Colloidal Disorder-Order Transitions
CDOT-3	Colloidal Disorder-Order Transitions-3
CDR	Critical Design Review
CDSF	Commercially Developed Space Facility
CEI SPEC	Contract End Item Specification
CELS	Controlled Environment and Life Support System
CELSS	Controlled Environment and Life Support System
CER	Cost Estimate Relationships
CET	Combined Environmental Test
CF	Constant Flux

CFES	Continuous Flow Electrophoresis System
CFIF	Continuous Flow Isoelectric Focusing
CFLSE	Critical Fluid Light Scattering Experiment (ZENO)
CFM	Candle Flames in Microgravity
CFM-2	Candle Flames in Microgravity-2
CFTE	Critical Fluid Thermal Equilibration
CFVME	Critical Fluid Viscosity Measurement Experiment
*CGEL	Colloidal Gelatin
CGF	Crystal Growth Facility (Japan) (Code EN) non-MSL AADSF
CheCS	Crew Health Care Systems
CHF	Continuous Heating Furnace (Japan)
*CHT	Capillary-Driven Heat Transfer
CI	Customer Integration
CIA	Critical Items List
CIBS	Coalescence Inhibition of Bubbly Suspensions Experiment
CIO	Customer Integration Office
CIEF	Continuous Isoelectric Focusing
CIP	Customer Integration Panel
*CIR	Combustion Integrated Rack
CITE	Cargo Integration Test Equipment
Cm	Centimeter
CM-1	Combustion Module-1
CM-2	Combustion Module-2
CMDSF	Crystals, Monomers, Deposition and Separation Facility
CMG	Control Moment Gyro
CNES	Centre National d'Etudes Spatiales (French National Center for Space Studies)
CO	Contracting Officer
CoDR	Conceptual Design Review
CoFR	Certification of Flight Readiness

COLLIDE-2	Collisions into Dust Experiment - 2
COMLAB	Commerce Lab
COMM	Commercial Missions
COS	Co-Orbiting Satellite
COTR	Contracting Officer Technical Representative
COTS	Commercial Off The Shelf
CPF	Critical Point Facility
CPL	Capillary Pumped Loop
CPL-2L	CVB/PHaSE-2/PCS-2/LFCA
CPSE	Common Payload Support Equipment
CRR	Cargo Readiness Review
CRT	Character Recognition Terminal
CRU	Catalytic Research Unit
CRWT	Containerless Ripple Wave Turbulence
CSC	Consulting Support Center
CSCI	Computer Software Configuration Item
CSD	Contract Start Date
CSD	Comparative Soot Diagnostics
*CSLM	Coarsening in Solid-Liquid Mixtures
CSLM-2	Coarsening in Solid-Liquid Mixtures-2
CSS-IPS	Common Support System-Integrated Payload System
CSU	Computer Software Unit
CT	Constant Temperature
CTL	Communications Test Lab
CVB	Constrained Vapor Bubble Experiment
*CVBT	Constrained Vapor Bubble Heat Exchanger
CVTE	Chemical Vapor Transport Experiment

**-D-**

DACS	Digital Acquisition and Control System
DARTFire	Diffusive and Radiative Transport in Fires Experiment
DAS	Data Acquisition System
DBMS	Data Base Management System
Dc	Direct Current
DCDU	Digital Cassette Data Unit
DCE	Droplet Combustion Experiment
DCE-2	Droplet Combustion Experiment-2
DCF	Droplet Combustion Facility
DCM	Diagnostics Control Module
DCR	Design Certification Review
DCR	Drawing Change Request
DDCE	Dynamics of Droplet Combustion and Extinction Experiment
DDF	Directors Discretionary Fund
DDM	Data Display Module
DDM	Drop Dynamics Module
DDS	Data Display System
DDT&E	Design, Develop, Test, and Evaluation
DDU	Data Display Unit
DECLIC	Dispositif pour l'etude de la croissance et des liquides critiques
DEL	Delivery
DEP	Dedicated Experiment Processor
DESI	Diffusion-Flames Extinction and Soot Inception
DFRC	Hugh L. Dryden Flight Research Center
DFVLR	Deutsche Forschungs-und Versuchsanstalt fur Luft-und Raumfahrt (German Aerospace Research Establishment)
DIF	Data Interchange Format
DMOS	Diffusive Mixing of Organic Solutions
DMS	Data Management System

DOC	Discipline Operations Center
DOD	Department of Defense
DOMSAT	Domestic Satellite
DOORS	Dynamic Object Oriented Requirements System
DPA	Data Processing Assembly
DPIMS	Diffusion Processes in Molten Semiconductors
DPM	Drop Physics Module
DPRO	Defense Procurement Resident Office
DR	Data Requirement
DSF	Directional Solidification Furnace (Grumman)
DT/DT	Drop Tube/Drop Tower (Facility)
DTA	Differential Thermal Analysis
DTA	Development Test Article
DTD	Droplet Technology Demonstration
DTF	Drop Tube/Tower Facility
DTO	Detailed Test Objective
DVT	Developmental Vibration Test
DWG	Discipline Working Group



**-E-**

EAC	Experiment Apparatus Container
EALX	External Airlock
EBF	Electron Bombardment Furnace
ECAS	Experiment Computer Applications Software
ECE	Experiment Checkout Equipment
ECG	Electroepitaxial Crystal Growth (MRA)
ECLSS	Environmental Control/Life Support System
ECOS	Experiment Computer Operational Software
ECP	Electromagnetic Containerless Processing
ECS	Energy Conversion Subsystem
ECS	Environmental Control Subsystem
ED	Engineering Directorate
EDAC	Error Detection and Correction
EDCA	Entropically Driven Colloidal Assembly
EDEP	Electrodeposition (UAH)
EDM	Engineering Development Model
EDO	Extended Duration Orbiter
EDR	Engineering Design Review
*EDSE	Equixated Dendritic Solidification Experiment
EDU	Experiment Development Unit
EE	Electronic Enclosure
EEE	Electronic, Electrical, Electromechanical
EEP	Experiment Electronic Package
EEU	ECS Electronics Unit
EEVT	Electrophoresis Equipment Verification Test
EGM	Electrostatics of Granular Materials Experiment
EGSE	Electrical Ground Support Equipment
EHS	Enhanced HOSC System
EICG	Electronic/Infrared Crystal Growth

EIRD	Experiment Interface Requirements Document
ELV	Expendable Launch Vehicle
EM	Engineering Model
EMC	Electromagnetic Compatibility
EMDI	Extended Mission Duration Items
EMI	Electromagnetic Interference
EML	Electromagnetic Levitator
EMS	Engineering Master Schedule
EMS	Experiment Mounting Structure
EMU	Extravehicular Maneuvering Unit
EMU	Extravehicular Mobility Unit
EOM	Earth Observation Mission
EOM	Engineering Operations Manual
EOS	Electrophoresis Operations in Space (MDAC)
EOS	Earth Observing System
EP	Experiment Package
EPCU	Electrical Power and Control Unit
EPDP	Experiment Power Distribution Box
EPROM	Erasable Programmable Read-Only Memory
EPS	Electrical Power System
EPS	Electrical Power Subsystem
ER#	EXPRESS Rack number
ERD	Experiment Requirements Document
*ERE	Extensional Rheology Experiment
ESA	European Space Agency
ESD	Electrostatic Discharge
ESE	Electrical Support Equipment
ESM	Experiment Service Module
ESP	Electronic Support Package

ESPS	Experiment Segment/Pallet Simulator
ESRO	European Space Research Organization
ESS	Energy Storage Subsystem
ESS	Experiment Subsystem Simulator
ESSA	EPCU Shutoff Switch Assembly
ET	External Tank
ETE	External Test Equipment
EU	Electronics Unit
EURECA	European Retrievable Carrier
EVA	Extravehicular Activity
EVAS	Extravehicular Activity System
EVP	Exhaust Vent Package
EXP	Experiment
EXPRESS	Expedite the Process of Experiments to the Space Station Rack

**-F-**

FA	Flight Accommodation
FAR	Final Acceptance Review
FAWG	Flight Assignments Working Group
FCA	Flow Control Assembly
*FCF	Fluids and Combustion Facility
FCU	FOMA Control Unit
FDC	Federal Data Corporation
FDD	Flight Data Document
FDE	Fluid Dynamics Experiment
FDF	Flight Data File
FDIR	Fault Detection, Isolation & Recovery
FDOR	Final Design and Operations Review
FDR	Final Design Review
FDSS	Fire Detection and Suppression System
FEA	Fluids Experiment Apparatus
FEA	Fluids Experiment Assembly
FEANICS	Flow Enclosure Accomodating Novel Investigations in Combustion of Solids
FEM	Finite Element Model
FEP	Front End Processor
FES	Fluids Experiment System
FES	Flash Evaporator System (an Orbiter subsystem)
FF	Free Flyer
FFEU	Free Float Electrophoresis Unit (Japan)
FFFT	Forced Flow Flamespread Test
FHA	Flight Hardware Availability
*FIR	Fluids Integrated Rack
FIST	Flammability Diagrams of Combustible Materials in Microgravity
FIVE	Front Interaction with Vortex Experiment
FMEA	Failure Modes and Effects Analyses

FMEA-CIL	Failure Modes and Effects Analyses/Critical Items List
FMPT	First Material Processing Test (Japan)
FO	Functional Objectives
FOAM	Foam Optics and Mechanics Experiment
FOMA	Fuel/Oxidizer Management Assembly
FOR	Flight Operations Review
FOV	Field of View
FPDF	Fluid Physics/Dynamics Facility
FPE	Fundamental Phenomena Experimentation
FRB	Failure Review Board
FRE	Functional Requirements Envelope
FRR	Flight Readiness Review
FS	Factor of Safety
FSAP	Fluid Science Avionics Package
FSD	Fabrication Support Division
FSDC	Fiber Supported Droplet Combustion
FSDC-3	Fiber Supproted Droplet Combustion-3
FSDM	Free Surface Deformation Measurement System
FSL	Fluid Science Laboratory (ESA)
FSS	Flight Support System
FSSS	Flight Segment Support System
FSUWG	Facility Science Users Working Group
FU	Flight Unit
FY	Fiscal Year
FZCGF	Float Zone Crystal Growth Facility (Battelle)
FZES	Float Zone Experiment System

**-G-**

g	Gravity
g0	normal gravity acceleration at sea-level
GaAs	Gallium Arsenide
GAC	Grumman Aerospace Corporation
GAS	Get-Away-Special
GAS Can	Get-Away-Special Canister
GBX	Glovebox (Biorack Configuration)
GC	Gas Chromatograph
GC-MS	Gas Chromatograph-Mass Spectrometer
GCE	Ground Control Experiment
GCEL	Ground Control Experiment Laboratory
GDFE	Gas-Jet Diffusion Flames Experiment
GEF	Gas Evaporation Experiment Facility (Japan)
GEM	Generic Experiment Module
GEO	Geosynchronous Earth Orbit
GERME	Groupe D'Etude et Recherches, Sur Test Materieux Dans L'Espace
GEVS	General Environmental Verification Specification
GFE	Government Furnished Equipment
GFGAS	Gradient Furnace for Get Away Special
GFM	Granular Flow Module
GFP	Glass Fiber Pulling
GFP	Government Furnished Property
GH	Growth Hormone
GHF	Gradient Heating Facility
GHF	Gradient Heating Furnace (Japan)
*GI	Glovebox Investigations
GIDEP	Government/Industry Data Exchange Program
GIFFTS	Gravitational Influences on Flammability and Flamespread Test Systems
GIRD	Ground Integration Requirements Document

GIS	Gas Interface System
GIU	Ground Integration Unit
*GMSF	Growth and Morphology of Supercritical Fluids Experiment
GMT	Greenwich Mean Time
GN&C	Guidance, Navigation and Control
GOR	Ground Operations Review
GPC	General Purpose Computer
GPF-1&2	General Purpose Furnace
GPRF-G	General Purpose Rocket Furnace-Gradient
GPRF-I	General Purpose Rocket Furnace -Isothermal
GPS	Global Position Satellite
GPS	Global Positioning System
GPU	Ground Power Unit
GRC	Glenn Research Center
GSE	Ground Support Equipment
GSFC	Goddard Space Flight Center
GT	Ground Test

## **-H-**

H/W	Hardware
HAB	Habitability
HAL	High-temperature Acoustic Levitator
HAL/S	High-Order Programming Language for Spacelab Usage
HCR	Hardware Concept Review
HDR	High Data Rate
HDRR	High Data Rate Recorder
HDW	Hardware
HFR	High Frame Rate
HGCS	Human Granulocyte Colony Stimulating
HGS	Holographic Ground System
HH-G	Hitchhiker (Goddard)
HH-M	Hitchhiker (MSFC)
HHVT	High Resolution, High Frame Rate Video Technology
HIA	Holographic Imaging Apparatus
HiBMs	High Bit Depth Multi Spectral Camera Package
HM	Habitation Module
HMF	Health Maintenance Facility
HOSC	Huntsville Operations Support Center
HPA	Handling and Positioning Aid
HPCG	Hand-held Protein Crystal Growth
HPF	Heat Pipe Furnace
HPIR	Heat Pipe Radiator
HQ	NASA Headquarters
HR	High Resolution
HRAP	Heat Rejection Augmentation Package
HRDL	High Rate Data Link
HRF	Human Research Facility
HRM	High Rate Multiplexer



HTFT	High Temperature Furnace Technology
HTGPF	High Temperature General Purpose Furnace
HTM	High Temperature Materials
HW	Hardware
HX	Heat Exchanger
Hz	Hertz (Cycles per Second)

I&O	Integration and Operations
IAM	Image Acquisition Module
IAO	International Announcement of Opportunity
IBSE	Initial Blood Storage Experiment
ICD	Interface Control Document
ICD	Interface Control Drawing
ICE	Interface Configuration Experiment
ICR	Investigation Continuation Review
IDE	Initial Design Evaluation
IDGE	Isothermal Dendrite Growth Experiment
IDMS	Information and Data Management System
IEF	Isoelectric Focusing Experiment
IF	Intermediate Frequency
IFF	Isoelectric Focusing Facility
IFM	Interface Measurements
IG	Igloo (Spacelab Pallet Missions)
IGI	Industrial Guest Investigator
IH/SR	Integration Hardware/Software Review
IHF	Isothermal (Japan)
II	Industrial Investigator
IIA	Instrument Interface Agreements
IM	Interface Measurements
IMF	Image Furnace (Japan)
IML	International Microgravity Laboratory
IMU	Inertial Measurement Unit
INEPT	EN Engineering Panel Telemail
InSPACE	Investigating the Structur of Paramagnet Aggregates from Colloidal Emulsions
IOC	Initial Operating Capability
IOC	Initial Orbiting Capability

IOP	Input/Output Processor
IOU	Input/Output Unit
IPL	Integrated Payload
IPP	Image Processing Package
IPRD	Integrated Payload Requirements Document
IPS	Instrument Pointing System
IPSU	Image Processing and Storage Unit
IR	Infrared
IR&D	Independent Research and Development
IRD	Interface Requirements Document
IRIG	Inter-range instrumentation group (time format in Spacelab)
IRR	Integration Readiness Review
IRR	Interface Requirements Review
IRR	Initial Requirements Review
IRSM	Incubator Refrigerator Storage Module
ISA	Inertial Sensor Assemblies
ISC	International Space Corporation
ISET	Intercenter Systems Engineering Team
ISF	Industrial Space Facility
ISPR	International Standard Payload Rack
ISR	Interim Systems Review
ISS	International Space Station
ISSP	Information System Strategic Plan
ISTF	Integrated Services and Test Facility (Canada)
ISY	International Space Year (1992)
ITA	Instrumentation Technology Associates, Inc.
ITCS	Internal Thermal Control System
ITIP	International Technology Integration Panel
ITUS	Integrated Thermal Utility System

IVA	Intravehicular Activity
IWG	Investigators Working Group
IWG	Integration Working Group

JCA	Joint Cooperative Agreement
JEA	Joint Endeavor Agreement
JEM	Japanese Experiment Module
JIS	Joint Integration Simulation
JPL	Jet Propulsion Laboratory
JSC	(Lyndon B.) Johnson Space Center
JSLWG	Joint Spacelab Working Group
JURG	Joint User Requirements Group

**-K-**

K	Kelvin
KBPS	Kilobytes Per Second
Kg	Kilogram
KO	Kick Off
KSC	(John F.) Kennedy Space Center

LAB	Laboratory
LAN	Local Area Network
KaRC	Langley Research Center
LASS	Large Amplitude Space Simulator
LBFT	Langmuir-Blodgett Trough Facility
LCPMC	Lead Center Program Management Council
LDEF	Long Duration Exposure Facility
LDF	Liquid Drop Experiment Facility (Japan)
LDR	Large Deployable Reflector
LDR	Low Data Rate
LDV	Laser Doppler Velocimeter
LDV	Laser Doppler Velocimetry
LED	Light Emitting Diode
LEO	Low Earth Orbit
LeRC	Lewis Research Center
LF-X	Logistics Flight
LFCA	Low Volume Fraction Colloidal Assemblies Experiment
LIF	Large Isothermal Furnace (JAPAN)
LIMS	Lewis Information Management System
LLL	Low Light Level
LLSI	Laser Light Scattering Instrument
LM	Logistics Module
LME	Liquid Motion Experiment
LMI	Lewis Management Instruction
LMM	Light Microscopy Module
LOS	Loss of Signal
LOS	Line of Sight
LPE	Lamda Point Experiment
LPES	Lamda Point Experiment System

LPS	Liquid Phase Sintering
LPS	Launch Processing System
LRDL	Low Rate Data Link
LS	Life Sciences
LSA	Large Space Antenna
LSE	Laboratory Support Equipment
LSLAB	Life Sciences Laboratory
*LSP	Laminar Soot Processes
LSRF	Life Sciences Research Facility
LSSP	Launch Site Support Plan
LSW	Lifshitz, Slyozov and Wagner (Theory of Alloys)
LTE	Levigator Technology Experiment (ACES II)
LTGHE	Low-Temperature Gradient Heating Furnace
LTRF	Low Temperature Research Facility
LVLH	Local Vertical, Local Horizontal
LVLH	Local Vertical, Local Horizontal Meter



**-M-**

m	Meter
M&P	Materials and Processes
MA	Multiple Access
MA	Mission Assignment
MAC	Microgravity Advisory Committee
*MAMS	Microgravity Acceleration Measurement System
MAP	Mission Activity Plan
MAS	Metals/Alloy Solidification
MASA	Metals and Alloys Solidification Apparatus
MASU	Metal Alloy Separation Unit
MAUS	Materialwissen Autonomie Experimente Unter Schwerelosigkeit
MBE	Molecular Beam Epitaxy
MBPS	Megabytes Per Second
MCC	Mission Control Center
MCD	Modular Capabilities Document
MCDS	Management Communications and Data System
MCF	Modular Combustion Facility
MCP	Monitoring Control Panel
MCPF	Modular Containerless Processing Facility
MCU	Marangoni Convection Unit
MD	Middeck
MDAC	MacDonnell Douglas Aerospace Corporation
MDB	Master Data Base
MDCA	Multi-user Droplet Combustion Apparatus
MDE	Mission Dependent Equipment
MDM	Multiplexer/Demultiplexer
MDTSCO	MacDonnell Douglas Technical Services Company
MEA	Materials Experiment Assembly
MEL	Microgravity Emissions Laboratory

MEL	Modular Electromagnetic Levitator
MEM	Middeck Electronics Module
MEPF	Multiple Experiment Processing Furnace
MEPHISTO	Material pour l'Etude Phenomenes Interes la Solidif surTerre Orbite
MFC	Mass Flow Controller
MFCD	Microgravity Fluids and Combustion Diagnostics
MFCT	Modular Furnace Component Technology
MGFA	Multiuser Gaseous Fuels Apparatus
MGI	MICROSCALE Glovebox Investigation
MGM	Mechanics of Granular Materials
MGM-III	Mechanics of Granular Materials Experiment - III
MGSE	Mechanical Ground Support Equipment
MHF	Mirror Furnace (ESA)
MHRR	MSAD Hardware Reflight Review
MIA	Mission Implementation Agreement
MIC	Management Information Center
MICG	Mercury Iodide Crystal Growth
MICOM	Mission Command
MIDAS	Miscible Interface Dynamics and Simulation Experiment
*MIM	Micro Isolation Mount
MINC	Module Interconnect
MIP	Mission Integration Panel
MIP	Mission Integration Planning
MIS	Management Information System
MIS	Magnetic Isolation System
MIT	Massachusetts Institute of Technology
MIT	Mission Integration Team
MIUL	Material Identification and Usage List
MLI	Multilayer Insulation

MLR	Monodisperse Latex Reactor
MLRS	Monodisperse Latex Reactor System
MLSA	Modified Launch Services Agreement
MMAP	Microgravity Measurement and Analysis Project
MMFF	Modular Multizone Furnace Facility (now SSFF)
MMO	Mission Management Office Meeting
MMP	Magnetospheric Multiprobe
MMPF	Microgravity and Materials Processing Facility
MMSL	Microgravity Materials Science Laboratory
MMU	Manned Maneuvering Unit
MMU	Mass Memory Unit
MOBI	Microgravity Observations of Bubble Interaction Experiment
MOD	Module
MOMM	Microscopy and Optical Manipulation Module
MORD	Mission Operations Requirements Document
MOU	Memorandum of Understanding
MP	Major Payload
MPAK	Middeck Payload Accommodation Kit
MPE	Mission Peculiar Equipment
MPES	Mission Peculiar Experiment Support Structure
MPLM	Multi-Purpose Logistics Module
MPS	Materials Processing in Space
MRA	Microgravity Research Associates
MRA	Mechanical Readiness Assessment
MRB	Material Review Board
MRD	Mission Requirements Document
MRDB	Mission Requirements Data Base
MRDL	Medium Rate Data Link
MRDOC	Microgravity Research, Development and Operations Contract
MRI	Midwest Research Institute

MRMS	Mobile Remote Manipulator System
MROFIE	Mission Requirements on Facilities/Instruments/Experiments for STS Attached Payloads, MSFC JA-447
MRPO	Microgravity Research Program Office
MRR	Mission Readiness Review
MRT	Microgravity Research Team
MRWG	Mission Requirements Working Group
MS	Margin of Safety
MS	Materials Science
MSA	Microgravity Science and Applications
MSAD	Microgravity Science and Applications Division (Code EN
MSC	Microgravity Smoldering Combustion Experiment
MSCRE	Microgravity Smoldering Combustion Experiment-Reflight
MSD	Microgravity Science Division
MSDR	Materials Science Double Rack
MSEIS	Microgravity Systems Engineering Information System
MSFC	(George C.) Marshall Space Flight Center
MSG	Microgravity Science Glovebox
MSL	Materials Science Laboratory
MSL	Microgravity Science Laboratory
MST	Measurement Status Table
MTE	Mass Transport Experiment
MTL	Manufacturing and Technology Laboratory
MTL	Moderate Temperature Loop
MTPE	Mission to Planet Earth (NASA)-Code Y
MTTR	Mean Time to Repair
MTU	Master Timing Unit
MUA	Material Utilization Agreement
MVP	Master Verification Plan
MWEU	Moving Wall Electrophoresis Unit

MWSF

Molecular Wake Shield Facility

**-N-**

NAC	NASA Advisory Council
NAR	Non-Advocate Review
NASA	National Aeronautics and Space Administration
NASACOM	NASA Communications System
NASDA	National Space Development Agency of Japan
NBS	National Bureau of Standards
NBX	Nucleate Boiling under Microgravity Experiment
NCC	NASA Communications Control
NCTM	Non-Contact Temperature Measurements
NFF	Normal Freezing Furnace
NHB	NASA Handbook
NIA	Network Interface Adapter
NIH	National Institutes of Health
NIST	National Institute of Science & Technology
NIU	Network Interface Unit
NLOMTF	Non-Linear Optical Monomer Thin Films (UAH)
NLOOC	Non-Linear Optical Organic Crystals (UAH)
nm	Nanometers
nm	Nautical Miles
NMI	NASA Management Instruction
NMMSA	NASA Microgravity Materials Science Assessment Task Force
NOA	New Obligation Authority
NOAA	National Oceanic and Atmospheric Administration
NRA	NASA Research Announcement
NRL	Naval Research Laboratory
NSF	National Science Foundation
NSPAR	Nonstandard Parts Approval Request
NSSDC	National Space Science Data Center
NSTL	National Space Technology Laboratories

NSTS

National Space Transportation System

O&C	Operations and Checkout
OACT	Office of Advanced Concepts and Technology
OAFD	Orbiter Aft Flight Deck
OARE	Orbital Acceleration Research Experiment
OB	Optics Bench
OCF	Organic Crystal Growth Facility (ESA)
OCP	Office of Commercial Programs (NASA) - Code I
OCZ	Operational Control Zone
ODIN	Office Desktop Initiative for NASA
OFPU	Optical Fiber Production Unit
OFT	Orbital Flight Test
OIA	Orbiter Interface Adaptor
OLIC	On-Orbit Leak Integrity Check
OLMSA	Office of Life and Microgravity Sciences and Applications (NASA)-Code U
OM	Optics Module
OMRS	Operations and Maintenance Requirements Specifications
OMS	Orbital Maneuvering System
OMS&A	Office of Mission Safety and Assurance
OMU	Orbital Maneuvering Unit
OMV	Orbital Maneuvering Vehicle
OPCGF	Organic and Polymer Crystal Growth Facility
OPF	Orbiter Processing Facility
OPI	Optics Plate Interface
OPPE	Organic and Polymer Processing Experiment (3M)
ORAM	Orbital Repair and Maintenance
ORR	Operations Readiness Review
ORSEP	Organic Separation
ORU	Orbital Replacement Unit
OSF	Office of Space Flight (NASA) - Code M



OSO	Office of Space Operations (NASA) -Code T
OSS	Office of Space Science (NASA) - Code S
OSS	Office of Space Station (NASA) - Code S
OSTDS	Office of Space Tracking and Data Systems (NASA) - Code T
OSV	Orbital Servicing Vehicle (Japan)
OSV	Orbiting Servicing Vehicle (Japan)
OTA	Office of Technology Assessment
OTFE	Oscillatory Thermocapillary Flow Experiment
OTV	Orbital Transfer Vehicle

PA	Power Amplifier
PA	Product Assurance
PACE	Physics and Chemistry Experiment Program
PACS	Pointing And Control System
PAD	Program Approval Document
PaDR	Payload Design Review
PAH	Payload Accommodations Handbook
PAI	Product Assurance Instruction
PAM	Payload Accommodation Manager
PAM	Payload Assist Module
PAM	Project Assurance Manager
PAM	Project Assurance Manual
PAP	Product Assurance Plan
PASLB	Passive Acoustics Stabilization of Liquid Bridges
PBE	Pool Boiling Experiment
PBM-1	Pool Boiling Module-1
PC	Personal Computer
PCA	Payload Clamp Assembly
PCB	Power Control Box
PCCE	Particle Cloud Combustion Experiment
PCDA	Power Control and Distribution Assembly
PCG	Protein Crystal Growth
PCGS	Protein Crystal Growth System
PCM	Pulse Code Modulation
PCM	Pulse Code Modulator
PCR	Payload Certification Review
PCTC	Payload Crew Training Complex
PCS	Portable Computer System
*PCS	Physics of Colloids in Space Experiment

PCS+	Physics of Colloids in Space Experiment Plus
PCS-2	Physics of Colloids in Space Experiment-2
PCU	Power Control Unit
PCU	Payload Checkout Unit
PCU	Power Conversion Unit
PDA	Payload Accommodations
PDC	Payload Developement Center
PDI	Particle Displacement Interfermetry
PDP	Plasma Diagnostics Package
PDR	Preliminary Design Review
PDRD	Program Definition and Requirements Document
PDSS	Payload Development Support System
PDT	Product Development Team
PE	Principle Engineer
PED	Payload Element Developer
PEPWG	Pressurized Element Working Group
PF	Platform
PFA	Post-Flight Annex
PFDAR	Post-Flight Data Analysis Review
PFE	Portable Fire Extinguisher
PFM	Protoflight Model
PFP	Program and Financial Plan
PGS	Power Generation Subsystem
PH	Hydrogen Ions in Gram Atoms per Liter
*PhaSE	Physics of Hard Spheres Experiment
PHaSE-2	Physics of Hard Spheres Experiment-2
PI	Payload Interrogator
PI	Preliminary Investigation
PI	Principal Investigator

PIA	Payload Interface Agreement
PIC	Project Initiation Conference
PID	Prime Item Development (Spec)
PID	Proportional, Integral, and Differential Gain
PID	Program Introduction Document
PIMS	Principal Investigator Microgravity Services
PIP	Payload Integration Plan
PIRN	Preliminary Interface revision Notice
PIV	Particle Imaging Velocimeter
PKE	Plasma Krystal Experiment
PL	Payload
PM	Program Manager
PM	Project Manager
PMAD	Power Management and Distribution
PMC	Permanent Manned Capability
PMC	Program Management Council
PMIC	Payload Missions Integration Contractor
PMMS	Process Material Management System
PMR	Program Management Review
PMT	photomultiplier tube
PMZF	Programmable Multi-Zone Furnace
POCC	Payload Operations Control Center
POD	Payload Operations Director
POIC	Payload Operation and Integration Center
POO	Pallet of Opportunity
POOC	Payload of Opportunity Carrier
POP	Program Operating Plan
POP	Perpendicular to Orbit Plane
POWG	Payload Operations Working Group
PP/L	Partial Payload

PP	Phase Partitioning
PP	Planning Package
PP&C	Payload Planning and Control
PPE	Phase Partitioning Experiment
PPMR	Payload Program Manager's Review
PPO	Planning Purposes Only
PRACA	Problem Reporting and Corrective Action
PRCB	Program Requirements Change Board
PRCU	Payload Rack Checkout Unit
PRE	Performance Requirements Envelope
PROM	Programmable Read-Only Memory
PRR	Program Requirements Review
PRR	Preliminary Requirements Review
PS	Phase Separation
PS	Project Scientist
PS	Payload Specialist
PSC	Performing Support Center
PSCN	Program Support Communications Network
PSH	Payload Support Hardware
psia	Pounds Per Square Inch Absolute
PSR	Pre-Ship Review
PSRD	Payload Simulator Requirements Document
PSTR	Pre-Storage Review
PTCU	Payload Training Center Unit
PTT	Part Task Trainer
PUFF	Combustion Characteristics of Fully-Modulated, Turbulent Diffusion Flames
PV	Photovoltaic
PVP	Payload Verification Plan
PVT	Physical Vapor Transport

PVTOS

Physical Vapor Transport of Organic Solutions (3M)

**-Q-**

QA	Quality Assurance
QD	Quick Disconnect
QE	Quality Engineering
QFD	Quality Function Deployment
QPQ	Quid-Pro-Quo

**-R-**

R&D	Research and Development
R&M	Reliability and Maintainability
R&PM	Research and Program Management
RAHF	Research Animal Holding Facility
RAU	Remote Acquisition Unit
RBFS	Risk-Based Fire Safety
RCB	Requirements Change Board
RCG	Reference Concept Group
RCS	Reaction Control System
RDR	Requirements Definition Review
REEFS	Radiative Enhancement Effects on Flame Spread
REU	Remote Electronic Unit
RF	Radio Frequency
RFCA	Rack Flow Control Assembly
RFI	Radio Frequency Interference
RFP	Request For Proposal
RFQ	Request For Quotation
RHA	Rack Handling Adaptor
RI	Rockwell International
RID	Review Item Discrepancy
RIEF	Recirculating Isoelectric Focusing
RIP	Rack Interface Panel
RITSI	Radiative Ignition and Transition to Spread Investigation
RKT	Rocket
RMMR	Reactionless Microgravity Mechanisms and Robotics
RMS	Remote Manipulator System
RMSA	Rack Maintenance Switch Assembly
ROC	Regional Operations Center
RP	Rocket Propellant



RP	Reference Publication
RPC	Remote Power Controller
RPCM	Remote Power Controller Module
RPDP	Recoverable Plasma Diagnostics Package
RPI	Rensselaer Polytechnic Institute
RR	Requirements Review
RTOP	Research and Technology Operations Plans
RTS	Remote Triaxial Sensors
RUP	Rack Utility Panel
RUR	Requirements Update Review
RUR	Reference Update Review
RVP	Requirements Verification Plan

S/W	Software
S/L	Spacelab
S&T	Science and Technology (Center)
S&TWG	Science and Technology Working Group
SAA	Science And Applications
SAAC	Space Applications Advisory Committee
SAAG	Science and Applications Advocacy Group
SAAL	Single-Axis Acoustic Levitator
SAAR	Small and Rapid Response
SAAX	Science and Applications Missions (No.)
SAB	Space Applications Board
SAGE	Standard Assurance Guidelines for Experiments
SAIL	Shuttle Avionics Integration Laboratory
SAL	Spread Across Liquids
SALSA	Solids Aflame in Low Stretch Air
SAMPIE	Solar Array Module Plasma Interaction Experiment
SAMS	Space Acceleration Measurement System
SAMS-FF	Space Acceleration Measurement System for Free Flyers
SAMS-II	Space Acceleration Measurement System for International Space Station
SAO	Safety Assurance Office
SAR	Shared Accommodations Rack
SATS	Station Accommodation Test Sets
SBIR	Small Business Innovative Research
SCD	Source Control Document
SCEF	Stress Corrosion Evaluation Form
SCES	Static Column Electrophoretic Separator
SCG	Solution Crystal Growth
SCIF	Static Column Isoelectric Focusing
SCO	Schedule Coordinating Office

SCOS	Subsystem Computer Operating System
SCR	Science Concept Review
SCU	System Control Unit
SCU	Signal Control Unit
SDA	Solute Diffusion Apparatus
SDL	Serial Data Link
SDP	Safety Data Package
SDR	System Design Review
SDT	Science Definition Team
SE	Sensor Enclosure
SEA	Statistical Energy Analysis
SE&I	System Engineering and Integration
SEB	Source Evaluation Board
SED	Space Experiments Division
SEDC	Sooting and Radiation Effects in Droplet Combustion Experiment
SEDCCS	SED Configuration Control System
SEE	Single Event Effect
SEF	Space Experiment Facility
SEID	Spacelab Experiment Interface Device
SEL	Space Experiments Laboratory
SEM	Scanning Electron Microscope
SEMS	Shuttle Environment Monitoring System
SEP	Support Electronics Package
SESAC	Space and Earth Science Advisory Committee
SESCO	Severe Environment Systems Company
S-FLAME	Structure and Response of Spherical Diffusion Flames
SHAP	Sample Handling and Analysis Plan
SHERE	Shear Extensional Rheology Experiment
SI	International System of Units

SIB	System Integration Board
*SIBAL	Solid Inflammability Boundary at Low-Speed
SiGMA	Gas-Particle Interactions in a Microgravity Flow Cell Experiment
SII	Space Industries, Inc.
SIM	Simulation
SIMS	Simulations of Spacelab Missions
SIPS	Spacelab Input Processing System
SIR	Systems Integration Review
SIV	Stereo Imaging Velocimeter
SL	Spacelab
SL-D2	Second German Spacelab
SL-J	Japanese Spacelab
SL-D1	First German Spacelab
SLDPF	Spacelab Data Processing Facility
SLS	Spacelab Life Sciences
SLS	Spacelab Simulator
SLSI	Surface Light Scattering Instruments
SM	Short Module
SOPS	Spacelab Output Processing System
*SOFBALL	Structure of Flame Balls at Low Lewis-Number
SOTA	State of The Art
SOW	Statement Of Work
SPA	Small Payload Accommodations
SPA	Software Product Assurance
SPACELAB-J	Japanese Spacelab Mission
SPACELAB-D	German Spacelab Mission
SPAR	Standard Payload Assurance Requirements
SPAR	Space Processing Applications Rocket
SPAH	Spacelab Payload Accommodation Handbook
SPAS	German Shuttle Pallet Satellite

SPGEN	Space Station Planning Group, EN
SPICE	Spacelab Payload Integration and Coordination in Europe
SPIDER	Smoldering Propagation Instability Diverging After External Radiation
SPL	Sonic Pump Levitator
SPPO	Spacelab Payload Project Office (MSFC)
SPS	Samples Per Second
SPSME	Spacelab Payload Standard Modular Electronics
SQUID	Superconducting Quantum Interference Detector
SR	Science Requirements
SR&QA	Safety, Reliability, and Quality Assurance
SRB	Solid Rocket Booster
SRD	Software Requirements Document
SRD	Shuttle Requirements Definition
SRD	Science Requirements Document
SRD	Shuttle Requirements Document
SRED	Science Requirements Envelope Document
SRR	System Requirements Review
SRR	Site Readiness Review
SS	Space Station
SSB	Space Science Board
SSC	Station Support Computer
SSC	Support Service Contractor
*SSC	Solid Surface Combustion Experiment
SSCB	Space Station Control Board
SSCC	Space Station Control Center
SSCE	Solid Surface Combustion Experiment
SSDMS	Space Station Data Management System
SSDS	Space Station Data Systems
SSFF	Space Station Furnace Facility

SSIP	Shuttle Student Involvement Project
SSIS	Space Station Information System
SSOTF	Space Station Operations Task Force
SSP	Space Station Program
SSPO	Space Station Program Office
SSPE	Space Station Program Element
SSSAAS	Space Station Science and Applications Advisory Subcommittee
SSSC	Space Station Support Center
SSST	Space Station Systems Trainer
SSTF	Space Station Traing Facility
SSWP	Space Station Work Package
STAMPS	Scientific and Technological Aspects of Materials Processing in Space
STB	Science and Technology Board
STD	Standard
STDCE	Surface Tension Driven Convection Experiment
STEF	Space Test and Evaluation Facility
STEP	Space Technology Experiments Platform
STR	System Test Review
STS	Shuttle Transportation System
STS	Space Transportation System
STT	Spacelab Transfer Tunnel
SURF	Space Ultra-vacuum Research Facility
S/W	Software

**-T-**

T/L	Timeline
T&C	Telemetry And Command
TAG	Technology Advocacy Group
TBD	To Be Done
TBD	To Be Decided
TBD	To Be Determined
TBE	Teledyne Brown Engineering
TBS	Thermal Bus System
TC	Thermal Control
TCR	Technical and Cost Review
TCS	Test Control System
TCS	Thermal Control System
TCS	Test Control Supervisor
TCS	Thermal Control Subsystem
TDAS	Tracking and Data Acquisition Satellite
TDASS	Tracking and Data Acquisition Satellite System
TDL	Technology Development Laboratory
TDM	Technology Development Missions
TDMP	Technology Development Missions Polar (Canada)
TDMX	Technology Development Missions (No.)
TDP	Technology Development Program
TDRS	Tracking and Data Relay Satellite
TDRSS	Tracking and Data Relay Satellite System
TEA	Technical Exchange Agreement
TEA	Torque Equilibrium Attitude
TEC	Thermoelectric Cooler
*TEM	Technological Evaluation of the MIM
TES	Thermal Energy Storage
TEQb	Thermal Equilibration-bis

TEZG	Tribological Experiments in Zero Gravity
TFCG	Thin Film Crystal Growth
TFDU	Thin Film Deposition Unit
TFR	Training Flight Rack
TFSUS	Task Force on Scientific Uses of the Space Station
TGDF	Transitional/Turbulent Gas Jet Diffusion Flames
TGS	Triglycine Sulfate
TGS	Telemetry Ground Station
TGS	Telemetry Ground System
THR	Test Hardware Received
TID	Test Installation Division
*TIGER-3D	Transition from Ignition to Flame Growth Under External Radiation in Three Dimensions
TIM	Technical Interchange Meeting
TLM	Telemetry
TMIS	Technical and Management Information System
TMM	Thermal Mathematical Model
TPC	Technical Performance Criteria
TPCE	Tank Pressure Control Experiment
TPFE	Two-Phase Flow Experiment
TRW	Thompson Ramo Woolridge
*TSC	Telescience Support Center
TSS	Tethered Satellite System
TST	Training Strategy Team
TT&C	Telemetry, Tracking and Command
TU	Technology Utilization
TU	Transport Unit
TVR	Test and Verification Review



**-U-**

U/D	Update
U.S.	United States
U.S.C.	United States Code
UAB	University of Alabama in Birmingham
UAH	University of Alabama in Huntsville
UCB	University of Colorado at Boulder
UCSD	University of California, San Diego
UF	Utilization Flight
UF-X	Utility/Utilization Flight
UG	NASA Headquarters Office Code for Division of Physical Sciences in Space
UIO	User Integration Office
UIP	Utility Interface Panel
UISWG	User Information System Working Group
UMRIS	User Mission Requirements and Information System
UOF	User Operation Facility
UPN	Unique Project Number
USAF	United State Air Force
USL	United States Laboratory
USML	United States Microgravity Laboratory
USML-1	United States Microgravity Laboratory-1
USMP	United States Microgravity Payload
USMP-2	United States Microgravity Payload-2
USRA	Universities Space Research Association
UTC	User Time Clock
UV	Ultraviolet

V	Volts
VAB	Vehicle Assembly Building
VAFB	VAFB Vandenberg Air Force Base
VAK	Vertical Access Kit
VCAP	Vehicle Charging and Potential
VCG	Vapor Crystal Growth
VCGS	Vapor Crystal Growth System
VDC	Volts Direct Current
VDS	Verification Data Set
VER	Verification
VET	Video Event Trigger
VFI	Verification Flight Instrumentation
V-FLAME	Field Effects of Gravity on Lean Premixed Turbulent Flames
VHSIC	Very High Speed Integrated Circuit
VIT	Vibration Isolation Technology
VITR	Video/Instrumentation Tape Recorder
VMA	Vacuum Maintenance Assembly
VPF	Vertical Processing Facility
VTRE	Vented Tank Resupply Experiment
VVS	Vacuum Vent System

**-W-**

WBR	Workbench Rack
WBRIS	Workbench Rack Illuminations Subassembly
WBS	Work Breakdown Structure
WCS	Waste Control System
WFCA	Water Flow Control Assembly
WFF	Wallops Flight Facility
WIF	Wire Insulation Flammability Experiment
WP	Work Package
WSGT	White Sands Ground Terminal
WTCS	Water Thermal Control Assembly
WTR	Western Test Range
WWV	National "Time Standard" Call Letters

**-X-**

**-Y-**

**-Z-**

ZCG	Zeolite Crystal Growth
ZENO	Critical Fluid Scattering Experiment (CFLSE)
ZIN	ZIN Technologies, Inc.
ZOE	Zone of Exclusion

3AAL	Three-Axis Acoustic Levitator
3M	Minnesota Mining and Manufacturing Company